

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-12. (Canceled)

13. (Currently Amended) A method of fabricating a submicron semiconductor device comprising:

forming a thermal oxide layer on a substrate;

forming a polysilicon layer on said thermal oxide layer;

forming a hard mask on said polysilicon layer, wherein said hard mask is a SiH_4 oxide deposited by PE-CVD;

depositing a photoresist on said hard mask and patterning said photoresist by using a mask;

etching said hard mask by plasma etching to form a thin hard mask pattern by using the photoresist pattern as an etching mask so that the hard mask pattern can have a narrower width than that of the photoresist pattern;

etching said polysilicon layer by using the hard mask pattern as an etching mask;

etching a polymer formed as a residual product resulting from etching said polysilicon layer; and

selectively removing said hard mask pattern using ~~a wet etch~~ an etching process while protecting said polysilicon layer and said thermal oxide layer from etching, wherein said etching process is performed by HF gas on a hot plate, said HF is generated gasifying a solution of about 39% HF, as the same time that said gas protects a polysilicon gate and a gate oxide, said HF gas is formed through spraying N_2 gas onto the surface of a chemical bath containing HF solution, and said hot plate has a temperature of about 50~90°C.

14. (Original) The method according to claim 13, further comprising depositing an ARC on said hard mask so as to lower reflectivity.

15.-17. (Canceled)

18. (Currently amended) The method according to claim 13, wherein an etching rate of said ~~wet-etching~~ etching process is less than about 1Å/min for said gate oxide and more than about 200Å/min for said hard mask.

19. (Original) The method according to claim 13, wherein said photoresist patterning is performed using a KrF Laser as a light source.

20.-21. (Canceled)

22. (Previously presented) The method according to claim 13, wherein said polymer is etched by using a dilute HF cleaning process.